



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,379	03/18/2004	Mitsuyoshi Onoda	7052/TOS	5500

3574 7590 06/27/2007

JOHN E. TOUPAL
116 CONCORD STREET
FRAMINGHAM, MA 01701

EXAMINER

ROE, JESSEE RANDALL

ART UNIT	PAPER NUMBER
----------	--------------

1742

MAIL DATE	DELIVERY MODE
-----------	---------------

06/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,379	ONODA, MITSUYOSHI	
	Examiner	Art Unit	
	Jessee Roe	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

Claims 6-11 are new and claims 1-5 are currently canceled.

Specification

The amendment filed 5 April 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "According to the present invention, undesirable hard surfaces of a wire material produced during scalping or shaving are eliminated by subsequently annealing the wire to soften the hardened surfaces before drawing and *carrying out an acid temper treatment on the wire.*". The specification filed 18 March 2004 references an oil temper treatment but not an acid temper treatment.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not provide support for the step of

quenching the wire or for the formation of an oxide scale film having a thickness of between 1 and 5 μm .

Claims 10-11 are rejected because of their dependence on claim 9.

Examiner Interpretation

The Examiner has interpreted the term "scalping" as a removing of material. Therefore, any actions leading to the removal of material read on "scalping".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. (US 6,372,056) with evidence from the ASM Handbook Volume 1.

In regards to claim 6, Kuroda et al. ('056) disclose a method for producing oil tempered wire comprising the steps of drawing, shaving (removing of material), oil tempering, and heat treating (annealing) in the range of 450-750°C to soften the hard surface layer (col. 2, lines 1-29). The wire material would have a diameter predetermined by the size of the die as Die size / diameter of wire (D/d) = 2 (col. 6, lines 28-44). Kuroda et al. ('056) do not specify oil tempering in a protective gas atmosphere

(in the absence of oxygen). Therefore, oil tempering would be conducted in ambient thereby inherently forming an oxide film.

Kuroda et al. ('056) disclose a method for producing oil tempered wire, that would have less than 0.035 weight percent phosphorus and sulfur (nonmetallic) and would be rolled (col. 1, lines 57-67) as shown above with a work hardened surface layer. However, Kuroda et al. ('056) do not specify wherein the wire would have nonmetallic inclusions.

The ASM Handbook Volume 1 discloses that the nonmetallic inclusions of high strength low alloy steels, which are substantially similar in composition to steel of the instant invention and Kuroda et al. ('056), would become elongated during rolling (pg. 413, col. 1).

Therefore, it would be expected that the oil tempered wire, as disclosed by Kuroda et al. ('056), would have nonmetallic inclusions that would become elongated in the rolling direction during rolling, as disclosed by the ASM Handbook Volume 1, because both the steel disclosed by ASM Handbook Volume 1 and the oil tempered steel wire of Kuroda et al. ('056) would be would be high strength low alloy steel and both would be rolled.

In regards to claim 9, Kuroda et al. (US 6,372,056) disclose oil tempering which would be conducted in ambient thereby inherently forming an oxide scale film. The thickness of the oxide scale film would depend on the amount of time the wire would be exposed to oxygen. Therefore, it would have been obvious to one of ordinary skill in the

art at the time the invention was made to modify the time of exposure to oxygen in order to achieve a desired oxide scale thickness (varied characteristic properties) (Example).

Claims 7-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. (US 6,372,056) with evidence from the ASM Handbook Volume 1 in view of Guthrie et al. (US 1,815,505).

In regards to claims 7 and 10, Kuroda et al. ('056) with evidence from ASM Handbook Volume 1 disclose a method for producing oil tempered wire as shown above, but Kuroda et al. ('056) with evidence from ASM Handbook Volume 1 do not specify wherein the annealing would take place in an atmosphere containing oxygen and nitrogen.

Guthrie et al. ('505) disclose annealing in an air environment to burn off any oil or carbonaceous material that may be present (col. 1, line 43 – col. 2, line 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to anneal the wire material, as disclosed by Kuroda et al. ('056), in an air atmosphere, as disclosed by Guthrie et al. ('505) with evidence from the ASM Handbook Volume 1, in order to burn off any oil or carbonaceous material that may be present, as disclosed by Gurtherie et al. ('505) (col. 1, line 43 – col. 2, line 2).

In regards to claims 8 and 11, Kuroda et al. ('056) disclose that the heat treatment (annealing) would be performed in the temperature range of 450-750°C (col. 2, lines 1-30).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

ROY KING 
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700